INDEX TO VOL. LII

Electrical Review

NEW YORK

JANUARY 4 TO JUNE 27, 1908

INDEX TO VOLUME LII

ELECTRICAL REVIEW

JANUARY 4 TO JUNE 27, 1908

Articles marked * are illustrated; (E) indicates "Editorial"; (R) indicates "Reviews of Current Engineering Literature;"

A

Accumulator-driven electric barges (R) 392
Adopts third rail 288
Advantages of electrical power in rolling mills (E) 932
Advertisement, a unique 85
Advertising, short talks on central station, by J. O. Little 644, 679
Aerial and underground construction, by C. H. Judson 378
Africa, the telegraph system across, by Albert H. Bridge* 9
Air-gap in dynamo machines, the reluctance of the, by Thos. F. Wall* 22, 48
Air on the transmission of electric waves, the effect of the condition of the (E) 637
Allis-Chalmers Company, bonus for 888
Allis-Chalmers Company, department and district office managers* 241
Alternating-current motor, a new* 261
Aluminum and bauxite 915
Aluminum, effect of chilling (R) 282
Aluminum output, world's 687
Amalgamation of German wireless patents, important 608
American Circular Loom Company, the 639
American Civic Association renews its fight to preserve scenic Niagara 287
American Electrochemical Society 359, 495, 645, 705
American Electrochemical Society, thirteenth general meeting 713
American-German patent agreement proposed 905
American industrial conditions from a workman's viewpoint (R) 656
American Institute of Electrical Engineers 17, 99, 191, 303, 377, 461, 642, 812, 937, 957
American Institute of Electrical Engineers (E) 851
American Institute of Electrical Engineers, annual dinner of the 220, 264, 355
American Institute of Electrical Engineers, annual meeting of the 755
American Institute of Electrical Engineers' development 413
American Institute of Electrical Engineers, meetings of the Schenectady section of the 329, 719
American Institute of Electrical Engineers, Pittsburg section of the 143
American Institute of Electrical Engineers, the value of membership in the 528
American Institute of Electrical Engineers, Toronto section elects officers 812
American Institute of Electrical Engineers' Land and Building Fund 1020
American Museum of Safety Devices 581
American Museum of Safety Devices, award of medals by the 915
American National Red Cross, the 465
American Railway Association acts on rail standards and adopts clearance diagrams for third-rail working conductors 689
American Society of Mechanical Engineers 215, 350, 494, 638, 730, 827, 946
American Society of Mechanical Engineers, March meeting of the 350
American Society of Mechanical Engineers, semiannual meeting of the 638, 827, 946
American Street and Interurban Railway Association, executive committee meeting of the 220
American Street and Interurban Railway Engineering Association, meeting of the 220
American Street and Interurban Transportation and Traffic Association, organization meeting of the 220
American Telephone and Telegraph Company, annual report of the 496
American Telephone and Telegraph Company, Theodore N. Vail to the stockholders of the 574
Ampere, the absolute value of the 912
Annual meeting of the New York Electrical Society 943
Annual meeting of the Electric Properties Company 986
Annual meeting of the National Electrical Trades Association 988
Armor-plate vaults of the Carnegie Safe Deposit Company, the 1004
Annual report of the General Electric Company 706
Anthony, Professor William A., by F. M. Hartmann* 906
Anthony, William Arnold (E) 899
Application to vacate Interborough-Metropolitan company's charter denied 841
Approve Westinghouse plan 737
Arc-circuit distribution, subdividing (E) 522
Arc in wireless telegraphy, the (E) 133
Arthur Jones Company, the* 123
Artificial light, the quality of (E) 806
Asymmetrical conduction in a vacuum tube (E) 932
Asynchronous generating station, the (E) 928
Atmosphere, the electrical properties of the (E) 521
Atmospheric electricity (E) 523
Atmospheric fog and electricity 380
Attractive series of electrical advertisements, an* 840
Austrian railways, proposed electrification of the (E) 602
Automatic Electric Company and the Strowger Telephone Company, final merger of the 621
Automatic telephone merger 527
Automobile show in Newark, N. J., a successful 379
Auxiliaries, steam or electrically driven, by Frank Koester* 212
Award cut from $132,000 to $1 9

B

Ball bearings on electric motors, the use of 180
Barnard, B. S., & Company establishes western office 84
Berjonneu system of electric transmission of pictures, the (R) 197
Berry series-transformer switch for saving light-load losses, the (R) 361
Bavaria, plans for electric railway development in (E) 981
Binding-posts for snap-switches 526
Book Reviews.
An Introductory to the Study of Electrical Engineering. Norris 219
Arithmetic of Electrical Engineering. Whittaker 346
Continuous-Current Engineering. Hay 275
Cours d'Electricité. Pellat 275, 612
Development and Electrical Distribution of Water Power. Lyndon 1027
Electric Power and Traction. Davies 987
Electricity. What Is It? Verschoyle 987
Electrical Instruments and Testing. Schneider and Hargrave 313
Electrical Railroading. Aylmer-Small 652
Electrical Traction. Wilson and Lydall 219
Electric Railways. Ashe 275
Electric Wiring and Fitting for Plumbers and Gasfitters. Walker. 462
Engineering Index Annual. The *Engineering Magazine* 612
Engine-Room Chemistry. Gill 275
Engineers' Descriptive Charts. Branch 987
Experimental Electrical Engineering. Karapetoff 276
Fowler's Electrical Engineer's Pocketbook. Fowler 652
Handbook for the Care and Operation of Naval Machinery. Dinger 652
Harper's Electricity Book for Boys. Adams 313
Inventions. Wright 707
Le Catalogue International des Principales Publications Periodeques. Guarini 652
Le Perou d'Anjour d'hui et le Perou de Demain. Guarini 652
Locomotives of 1907. Lake 707

59158

BOOK REVIEWS—*Continued.*
L'Usure Anormale des Turbines Hydrauliques. Dalemont..... 612
Neuere Elektrophysikalische Erscheinungen. Ruhmer..... 313
Plane Surveying. Phillips..... 313
Practical Physics. Franklin, Crawford and MacNutt..... 219
Practical Induction Coil Construction. Pike..... 1027
Practical Physics, vol. iii. Photometry, Light and Sound. Franklin, Crawford and MacNutt..... 408
Principles of Direct-Current Engineering. Parr..... 946
Profit-Making in Shops and Factory Management. Carpenter..... 1027
Questions and Answers in Electrical Engineering. Moore and Shaw 987
Simple Experiments in Static Electricity. Bull..... 707
Specifications and Contracts. Waddell 219
Standard Handbook for Electrical Engineers 276, 905
Standard Wiring for Electric Light and Power..... 707
Stationary Steam Engines. Fowler 462
Steam-Electric Power Plants. Koester 613
Technological Dictionary in French, German and English. Tolhausen 652
Telephone Construction, Installation, Wiring, Operation and Maintenance. Radcliffe and Cushing 767
The Colorado Springs Lighting Controversy. Floy..... 275
The Copper Handbook. Stevens... 612
The Electric Furnace in Iron and Steel Production. Kershaw..... 275
The Hughes and Baudot Telegraphs. Crotch..... 313
The Mechanical Design and Construction of Commutators. Livingstone 219
Theory, Design and Construction of Induction Coils. Armagnat..... 946
The Steam Turbine. Neilson..... 767
Thomas Alva Edison. Jones..... 275
Brake, a magnetic track (R)..... 918
Bristol Company, the..... 581
Bruce Peebles & Company, of Edinburgh, Scotland, in trouble..... 350
Building Trades Employers' Association exhibit 565
Bulk supply in Greater London (R)... 540
Burnouts of underground cables, unusual (R)..... 885

C

Cables, capacity of..... 610
Calcium cyanamide, the manufacture of 272
Canadian Bell Telephone meeting..... 420
Canadian Crocker-Wheeler Company, Limited 695
Canadian electrical convention postponed 825
Canadian mica exports growing..... 408
Canal boats, electric haulage of..... 456
Canals, electric propulsion on (E)..... 338
Canadian Electrical Association..... 1020
Carbide patent, a new..... 415
Careless use of scientific terms (E).... 703
Caribbean wireless stations..... 143
Centerville power plant, California, a high-head Francis turbine at the (R) 473
Central Electric Railway Association adopts uniform accounting..... 341
Central Electric Railway Association, the 218
Central Electric Traffic Association.... 556
Centralization of power supply (E).... 258
Central station practice..... 954
Chemical education of the engineer, the, by William H. Ellis..... 944
Chemical Engineers' Society, the..... 707
Chemistry, chair of..... 833
Chicago—an electrical city..... 64
Chicago Drainage Canal, the sanitary district of Chicago's hydroelectric development on the*..... 221
Chicago electrical show.....78, 98, 150
Chicago light ordinance passed..... 526
Chicago street railways ready for reorganization 235
Chicago telephone business..... 829
Chilean copper mines, poor outlook for. 25
Chinese telegraph lines..... 999
Chur, an interesting development of a small Swiss hydroelectric plant at, by Frank Koester*..... 813
Circles of electrical development (E).. 671
Circuit for receiving wireless signals, an ungrounded, closed*..... 262
Circuits, a method of controlling the spark discharge of condenser (R).. 80
City department of electricity, the..... 65
Civil service examinations for New York state and county service..... 107
172, 288, 495, 643, 836, 957
Civil service examinations for electrical engineer and mechanical draftsman 999
Claims—methods of handling same by electric railways, by Arthur W. Gross 726
Cleveland (Ohio) street railway settlement delayed..... 610
Coal industry in 1907, the..... 268
Coal on a scientific basis, the purchase of (R)..... 786
Coal, the weathering of (E)..... 374
Coffer-dam excavation, rapid, by Charles M. Ripley*..... 286
College of the City of New York, the... 642
Colonna double electric traction system, the 12
Coloration of glass and quartz by radium (R)..... 690
Commercial Day programme, National Electric Light Association..... 627
Commercial importance of the Southern Appalachian and the White Mountain watersheds..... 272
Commonwealth Edison Company, the*. 65
756
Commutation at high speeds, problems of (E)..... 488
Commutation, demonstration apparatus for illustrating..... 281
Commutation problem, the (R)..... 434
Comparative tests of lightning protective devices on the Taylor's Falls transmission system, by J. F. Vaughan 822
Commutation, the theory of (R)..... 1034
Components of electric waves, phase relation of the electric and magnetic. 567
Condenser with the time of discharge and the variation of capacity with frequency in the alternating-current measurements, the variation of apparent capacity of a (R)..... 787
Conductivity of iron stampings, the heat, by Thomas Morgan Barlow*.. 177
Conductors, the discharge of electricity from pointed (R)..... 435
Conservation of natural resources, conference on the.....755, 832
Conservation of natural resources, engineers on..... 644
Consolidated Railway Lighting and Refrigerating Company, receiver named for..... 1018
Consumers' Electric Company, of New Orleans, receiver for..... 624
Continuity of education, address on.... 827
Contracting engineer, a valuable book for the..... 247
Convention notes..... 877
CONVENTIONS.
American Electrochemical Society. 713
American Institute of Electrical Engineers 937
American Society of Mechanical Engineers 827
Canadian Electrical Association.825, 1019
International Independent Telephone Association.....63, 174
Iowa Electrical Association..... 720
Master Car Builders' Association... 1021
Missouri Electric Light, Gas and Street Railway Association..... 718
Nebraska Electrical Association... 790
National Electrical Contractors' Association 982
North Dakota Independent Telephone Association..... 941
Northwestern Electrical Association 146
National Electric Light Association, the.....708, 752, 808, 865
Society of Wireless Telegraph Engineers 937
Society for the Promotion of Engineering Education..... 943
Society for the Promotion of Engineering Education..... 1040
Cooking devices, a practical demonstration of the adaptability of electric.. 201
Cooling towers, by Charles L. Hubbard* 138
Cooper Hewitt mercury-vapor lamp, a new form of, by F. H. Von Keller*. 589
Copper industry, conditions of the*.... 226
Copper, the future of (R)..... 472
Cornell University, growth of..... 140
Correction, a..... 160
Corrosion of iron and steel, the (R)... 734
Corrosion of iron and steel, the..... 909
Cotton-spinning factories, electric driving in (R)..... 1001
Cranes for dock and harbor work, electric (R)..... 884
Cullercoats, England, the Poulsen wireless telegraph station at..... 145
Current weigher, an accurate (E)..... 898
Curtis turbine business..... 618
Curtis turbines in the power plant of the Nashua Manufacturing Company* 770

D

Dallas Securities Company, the..... 123
Damages decision, an important..... 47
Demagnetizing iron for magnetic testing, on the best method of (R).... 239

Detroit River tunnel, electric locomotives for*..... 580
Diamond into coke in high vacuum by cathode rays, the conversion of, by Charles A. Parsons and Alan A. Campbell Swinton*..... 654
Diamonds, artificial, by John B. C. Kershaw 381
Dinner of the American Institute of Electrical Engineers, the annual*.. 355
Directive system of wireless telegraphy, a, by O. C. Roos..... 727
Direct-current steam-turbine unit, an English 380
Distribution in suburban districts, by George H. Lukes*..... 938
Distribution of light, by Otto Foell*... 13
Dividend payments in stock..... 499
Dr. Branly's telemechanic device..... 237
Dynamite plant, electric power and lighting in a, by Warren Aikens*.. 504
Dynamo, a new train-lighting (R)..... 434
Dynamo-clause reform in standard insurance policy..... 689
Dynamometer, a remarkable*..... 50
Dynamophone, the, by H. Gernsback*.. 653
Dynamos, testing direct-current (E)... 553
Dynamo, the early days of the, by Sydney F. Walker..... 57

E

Earth's action on a magnet only a couple?, is the (R)..... 918
East River tubes connecting New York and Brooklyn, the*..... 557
Economizer, the Hallberg automatic electric, by J. H. Hallberg*..... 889
Economy Light and Power Company, suit against the..... 111
Edison Electric Illuminating Company of Brooklyn makes important lamp announcement 725
Edison medal, the..... 719
Edison operated on and improving..... 345
Edison Portland Cement Company visited by Brooklyn Engineers' Club 841
Edison's birthday, celebrating..... 318
Educating the worker (E)..... 39
Education of engineers, a plea for a liberal (E)..... 554
Eglin, William C. L..... 917
Eiffel Tower wireless telegraph station, the new, by C. L. Durand*..... 347
Electrical affairs in Great Britain during 1907, by Albert H. Bridge*.... 45
Electrical apparatus in a metallurgical laboratory 1040
Electrical Contractors' Association of Wisconsin 201
Electrical development, co-operative... 917
Electrical discharges through gases (R) 691
Electrical engineering education, by Charles P. Steinmetz..... 182
Electrical equipment of a modern engineering works, the (R)..... 282
Electrical industries in 1907, the..... 42
Electrically driven reversing rolling mills 815
Electrical men enjoy planked shad and waffles 941
Electrical methods, some needed (E).. 931
Electrical notes from Europe, by C. L. Durand 236, 419, 730, 951
Electrical notes from Great Britain, by Albert H. Bridge.....113
234, 418, 566, 728, 952
Electrical plant, insurance of an (R).. 434
Electrical porcelains..... 987
Electrical porcelains (R)..... 1034
Electrical power in farm work (E)... 375
Electrical progress in Europe, by C. L. Durand 55
Electrical Show Company, the..... 460
Electrical show at Chicago, third annual 98, 150
Electrical supplies for the Navy Department 10
86, 159, 185, 276, 346, 729, 815, 922, 1020
Electrical supply of Paris, the (E)..... 259
Electric current, the movement of particles of matter by the (E)..... 454
Electric discharges through gases (R). 735
Electric drive in a hardware factory, the 285
Electric driving in cotton-spinning factories (E)..... 1013
Electric haulage on canals (E)..... 455
Electric heating and cooking appliances, introducing, by George B. Johnson* 763
Electric iron and steel furnaces (R)... 1035
Electricity as an agent in conserving natural resources (E)..... 980
Electricity from peat..... 882
Electricity in London, the consumption of 505
Electricity in Peru..... 319
Electricity in the textile trade..... 325
Electric motors in churches (E)..... 2
Electric power for farm work..... 493
Electric power from wind..... 25
Electric power in iron and steel mills.. 812
Electric power supply, the commercial aspect of, by W. B. Woodhouse.... 53
Electric railway accounting, depreciation in, by Daniel Royse..... 680
Electric railway development in Bavaria, plans for (E)..... 981
Electric railways in Indiana..... 827
Electric vision (E)..... 1014
Electric welding (R)..... 239
Electric welding (E)..... 299
Electrification of steam railways..... 184
Electrification of the Swedish state railways, the..... 18
Electrolysis, report on..... 817
Electrolytic cells, recent developments in (R)..... 392
Electrolytic copper-refining industry, the, by John B. C. Kershaw..... 497
Electrolytic corrosion..... 1015
Electrolytic resistance, a new apparatus for measuring (R)..... 690
Electromagnetic induction (E)..... 453
Electrothermic production of iron and steel (R)..... 157
Emanation from sodium, an (E)..... 979
Emergency street railway brake, an (R) 834
Engelberg-Lucerne 25-000-volt overhead transmission, the (R)..... 540
Engineering as a life work..... 268
Engineering education, problems of (E) 406
Engineering education, the best, by Charles F. Scott..... 184
"Engineering honor."..... 764
Engineering nomenclature (R)..... 540
Engineer's activity in public affairs—public utility commissions and franchise valuations, the..... 604
Engineers' Club of Philadelphia elects officers 218
Engineer's education, the (E)..... 169
Engineering of the mechanical equipment of a large store building, by Percival R. Moses*.....983, 1031
England, the first single-phase railroad in, by Albert H. Bridge..... 1016
English power stations, recent, by A. H. Bridge* 852
Europe, electrical progress in, by C. L. Durand 55
Europe, Electrical notes from.....236
419, 730, 951
European practice in the electric equipment of theatres, by Frank Koester* 1023
Exposition of safety devices..... 276

F

Faraday Society, the.....110, 462, 881
Fares, handling, on interurban railways, by P. P. Crafts*..... 723
Federal suit begun against New Haven road 864
Feed-water, the purification of, by Charles L. Hubbard*.....7, 108
Fence posts made durable..... 52
Fertilizers, artificial (E)..... 257
Financial reports of electrical companies 342
460, 494, 527, 609, 639
731, 816, 882, 904, 957
Financial reports of electric companies. 986
Fire, electrical firms suffer damage by. 608
Fire in plant of Electric Cable Company 362
Fire in the Trenton (N. J.) plant of the Roebling company..... 285
Fire underwriters' report on the condition of the fire-alarm system in the Borough of Manhattan, New York city 824
Five-hundred-million-dollar electric line barred from the mails..... 721
Flaming arc lamp, characteristics of the (E)..... 41
Flashers, the manufacture of electric.. 796
Forest preservation (E).....210, 749
Forest preservation at the American Institute of Electrical Engineers..... 408
Forestry has done, what..... 821
Forestry meeting of the American Institute of Electrical Engineers..... 346
Forge in a mine, an electric (E)..... 3
Four-wire distribution (R)..... 114
France, electrical power in (E)..... 603
France, the electrical industry in (R).. 622
Franklin Institute reception..... 313
Fuels, by Charles L. Hubbard..... 766
Furnace for the smelting of iron, a new type of electric, by Professor B. Igewsky* 910
Fuse phenomena, by Alfred Schwartz and W. H. N. James*.....535, 572

G

Gamma and X-rays, the nature of (R). 657
Ganz three-phase locomotive, the new, by C. L. Durand*..... 989
Gas and electricity in Massachusetts... 812
Gas company loses..... 644
Gas-engine practice..... 936
Gas-engine practice, notes on*..... 672
Gas engines for steel foundry..... 460
Gases, electric discharges through (R). 735
Gas fires, a charge against (E)..... 97
Gas from waste products, producing illuminating and power*..... 512

Gasolene and alcohol as producers of power, the relative values of..... 539
Gasolene-electric automobile, a (R).... 734
Gasolene-electric systems for heavy vehicles (R)..... 623
Gas turbine development, progress in (E) 636
Gas turbine, recent developments in the (R) 656
Gem lamps, remarkable performance of 397
General Electric Company, the annual report of the..... 706
General Electric Company, election of directors of the..... 817
General Electric Company receives orders 495
General Electric Company's engineering convention..... 982
General Electric lamp factories, new... 327
Generating plant at Wolverhampton, England, extensions of the..... 565
Generator development, high-speed (E) 751
Generators, artificial load for testing electrical, by R. K. Morcom and D. K. Morris*..... 614
Generators at the Lincoln Wharf station of the Boston elevated, the new* 10
George Westinghouse..... 655
German Reichstag, an important wireless telegraph bill in the..... 172
German street railway statistics..... 943
Globe photometer in practical photometry, the (R)..... 657
Governmental control of wireless telegraphy 718
Government copper returns..... 287
Government experiment stations, a proposal to establish (E)..... 132
Government ownership of telephones unpopular in Manitoba?..... 528
Govenment report on smoke prevention 215
Grand Rapids electrical show..... 625
Great Britain during 1907, electrical affairs in, by Albert H. Bridge*..... 45
Great Britain, electrical notes from, by Albert H. Bridge..... 113
234, 418, 566, 728, 952
Greenock, Scotland, refuse-destructor plant (R)..... 393
Griffen, appreciation of General Eugene 377

H

Handling fares on interurban railways, by P. P. Crafts*..... 723
Hauserlake dam of the Missouri River Power Company, the failure of the* 770
Havana Electric Railway Company.... 446
Heating of ventilated and enclosed motors, by Wilson Hartnell*..... 818
Helices, electrical oscillations on..... 161
Helion lamp, progress in the development of the*..... 1039
Heusler magnetic alloys (E)..... 131
Heusler's magnetic alloy, by A. D. Ross* 144
High-efficiency lamp and the Topeka Edison central station, the new... 318
High-tension insulators for overhead transmission lines, some notes on (R) 834
High-voltage insulator manufacture, by Walter T. Goddard*..... 227
Home Show in New York City, the.193, 639
Honors from France..... 181
Hopkinson test applied to a single dynamo, the (R)..... 506
Hudson River, trains under the..... 327
Hudson River tunnels, formal opening of the.....285, 351
Hydroelectric plant, electrical equipment of a..... 201
Hydroelectric plant of the Rockingham Power Company, the, by Julian S. Miller* 409
Hydroelectric plants for Tokio, Japan.. 288

I

Iglesis and Regner train-lighting system, the..... 689
Illuminating Engineering Society (E).. 95
Illuminating Engineering Society elect officers, New England and Philadelphia sections of the..... 193
Illuminating Engineering Society, meeting of the Chicago section of the... 149
Illuminating Engineering Society, the.. 111
112, 190, 321, 376, 459, 620, 812, 830
Illumination and decoration (E)..... 297
Illumination, measurement of (R)..... 786
Illumination, some general notes on artificial (R)..... 919
Impostor working the electrical field, an 695
Incandescent-lamp construction, progress in (E)..... 897
Incandescent lamp, the "metalik"..... 1026
Incandescent lamps, the new, by Francis W. Willcox..... 774
Independent Electrical Contractors' Association of Greater New York, banquet of the..... 235
Indiana, electric railways in..... 827
Inductance in parallel wires (R)..... 361
Inductance measurements (R)..... 360
Induction motors, design of, by R. E. Hellmund* 172
Induction motor starters, by D. E. Carpenter* 244
Inductive interference with telephone circuits in proximity to high-potential transmission lines (R)... 965
Industrial chamber of horrors, an..... 218
Industrial engineering, a four-year course in (R)..... 964
Industrial outlook, the..... 17
INDUSTRIAL SECTION.
Adapter for tungsten lamps, new. B. E. Mfg. Co.*..... 967
Allis-Chalmers air-compressors at Pettibone-Mulliken Company's plant* 1002
Allis-Chalmers mining machinery for the Benito Juarez Mines Company 1003
Aluminum-cell lightning arresters. G. E. Co.*..... 737
American-Ball "Angle-Compound" high-speed steam engine, the new. A. E. Co.*..... 394
"American" flaming arc lamp, the. A. F. A. L. Co.*..... 326
Apple portable storage battery, the. A. E. Co.*..... 659
Arc lamp, a new flame. G. E. Co.*. 923
Arc lamp, the Queen "Acme." Q. & Co.*..... 545
Asbestos insulating material, a new. H. W. J.-M. Co.*..... 694
Automatic air dust-removing devices. S. D. Mfg. Co.*..... 328
Automatic emergency railway car brake, an 1036
"Autotherm," the. W. S. H., Jr.*.. 243
Baldwin Locomotive Works, electric-locomotive testing plant in the* 544
Barr electric flat-iron, a new. B. E. H. Co.*..... 625
Beautifying the grounds of the Crocker-Wheeler Company* 1038
Benjamin specialties, some new. B. E. Mfg. Co.*..... 29
Benjamin tungsten arc, the. B. E. Mfg. Co.*..... 659
Bliss trimming and squaring shear geared to Allis-Chalmers type "K" motor*..... 477
Boring and turning mill. W. E. & Mfg. Co.*..... 967
Brilliant electric lamps—a correction 968
Bristol Company at the Chicago electrical show, the*..... 200
Canadian Crocker-Wheeler Company, Limited..... 477
"Cartridge" jump spark-coil, the. C. C. Co.*..... 889
Chicago electrical show, the Bristol Company at the*..... 200
Color effects of artificial illuminants. W. E. Co.*..... 364
Commutating-pole generators in power plant of Boston Elevated Railway Company. G. E. Co.*... 246
Cooper Hewitt lamp, new model of the* 160
Diehl Manufacturing Company, the* 474

INDUSTRIAL SECTION—*Continued.*

Dynamometer, an electric. S. E. Co.* 161
Earll trolley catchers. L. E. Co.*.. 510
Eberhardt motor-driven shapers. G. & E.*..... 396
Electric dock hoist*..... 1037
Electrical measuring instrument for alternating currents and potentials. I. E. M. Co.*..... 120
Electric Machinery Company's alternators, the. E. M. Co.*..... 87
Electric-motor equipment is regarded by machinery manufacturers, how*..... 661
Electric motors in a concentrating plant. A.-C. Co.*..... 837
Fan motors for 1908. G. E. Co.*... 438
"Federal" couch bracket, the. F. E. Co.*..... 327
Federal tungsten cluster. F. E. Co.* 660
Flexible insulating coupling, a new. A. D. N. Co.*..... 839
Foundry blowers. P. H. & F. M. R. Co.* 922
G. & W. ground-pipe cap, the. G. & W. E. S. Co.*..... 660
Galvanometer, a new universal. Q. & Co.*..... 243
Galvanometer, portable cable-testing. L. & N. Co.*..... 509
Gasolene-electric car for railway service. G. E. Co.*..... 158
General Electric gasolene-electric car, trial run of..... 199
German arc lamps, to exploit..... 969
Glue-pot, a new electric. G. E. Co.* 476
Gould storage-battery installation, a new*..... 476
Hadaway heating apparatus for bookbinders. H. E. H. & E. Co.*. 626
"Hele-Shaw" clutch, the. M. & E. Co.* 839
Hoisting engines, a record production of*..... 797
Hoists, small electric. A.-C. Co*... 120
Holophane and imitation glassware—an interesting comparison*... 968
Hoyt electrical instruments. H. E. I. Wks.*..... 624
Hubbell polarity flush receptacles and wall plugs. H. H. Inc.*..... 395
Induction motor, a new type of. W. E. & Mfg. Co.*..... 588
Induction motor, remarkable performance of an..... 436
Instrument for alternating currents and potentials, a new electrical measuring, by John M. Lea. I. E. M. Co.*..... 120
Instruments, a new line of direct-current portable. G. E. Co.*.... 887
Insulators for extremely high-voltage lines. L. I. Co.*..... 545
"Just" tungsten lamps. E. A. Co.*. 86
"Kearney" cable clamp, the. W. N. M. & Bro.*..... 793
Kelman "Short-Circuit" breaker, the. J. N. K.*..... 542
Knife switches, the selection of. T. E. Mfg. Co.*..... 397
Lafayette Electrical Manufacturing Company, the purchase of the... 968
Lamp, a new high-voltage metallic-filament 396
Lamp, new pull-string turn-down. E. E. L. Co.*..... 794
Lighting, a new system of. H. W. J.-M. Co.*..... 242
Luminous arc rectifier system, series. G. E. Co.*..... 240
"Luxol" advertising sign, the..... 31
Mast-arm, a non-swaying. A. L. M. Co.*..... 86
Maximum-watt-demand indicator, a new. G. E. Co.*..... 739
Mechanical stoking a success. W. M. Co.*..... 837
Mercury-arc rectifier in moving-picture shows. G. E. Co.*..... 658

INDUSTRIAL SECTION—*Continued.*

Mercury-rectifier battery-charging outfits. W. E. & Mfg. Co.*..... 886
Motor-driven eraser. C. C. Mfg. Co.* 966
Motor-driven pumps. C.-W. Co.*.. 694
Multicoil feed-water heaters for stationary service. J. R. R. & S. Co.* 509
Multiple luminous arc lamps. G. E. Co.*..... 362
National type "3 VS" air-compressors, the. N. B. & E. Co.*... 542
Nernst lamp holder, a new N. L. Co.* 1005
New Lexington gas-fired porcelain insulators 923
Oil-break circuit-breakers for low-tension alternating-current circuits. H. C.-B. Co.*..... 692
Outlet plates for armored cables for "fished" work. J. L. G.*..... 365
Paper hoists, electric. S. E. Co.*.. 30
Printing attachment for power wattmeters 1005
Recent Allis-Chalmers motor orders 1036
Recording millivoltmeter and shunt ammeter, a new. W. E. I. Co.* 28
Reflectors for show-window lighting, a new system of. I. P. F.*.. 511
Rheostats, Westinghouse direct-current starting. W. E. & Mfg. Co.* 508
Removable rolled-rim gear, a new removable R. D. N. Co.*..... 1003
Sewage pumping stations at Dayton, Ohio, the. W. E. & Mfg. Co.* 738
Show-window illumination, an effective* 83
Signs, some notable electric. T. C. Co.* 794
Single-phase electric roads, signals for. B. S. & Mfg. Co.*..... 365
Sprague octagon box No. 6250. S. E. Co.*..... 1003
Sprague octagon box No. 6250..... 1038
Socket, a new locking. G. E. Co.*. 544
Steam turbine and generator for Washington Paper Mill..... 160
Steam turbine generating unit for Richmond, Va., large. V. P. & P. Co.*..... 199
Stereotyping, electric heat applied to. W. E. & Mfg. Co.*..... 888
Studio lighting with enclosed arc lamps. G. E. Co.*..... 693
Switches, new automatic time. H. T. S. Co.*..... 436
Telephone cable invention, an important. W. N. M. & Bro.*..... 363
Testing wattmeter, for direct-current circuits, a new. G. E. Co.*. 1002
Tool, a new wireman's. M. E. Mfg. Co.* 792
Tool-grinding, scientific. W. S. Co.* 588
Tungsten diffusing cluster, a new. G. E. Co.*..... 796
Tungsten lamps in competition with gas arcs..... 693
Tungsten series incandescent lamps. G. E. Co.*..... 119
"Tungstoliers." The Brilliant Electric Company*..... 1004
Universal family sewing-machine motor, a. W. E. & Mfg. Co.*.... 544
Variable-speed countershaft, the S. & S. R. F. & M. Co.*..... 838
Victor lamp-testing meter. H. W. J.-M. Co.*..... 86
Volt-wattmeter, the Keystone portable. K. E. I. Co.*..... 1036
Wagner transformers. W. E. Mfg. Co. 82
Washington Terminal Tunnel, ventilation of the*..... 198
Westinghouse air-compressors for pumping and conveying liquids. W. A. B. Co.*..... 201
Westinghouse air-compressors in laundry works. W. A. B. Co.*... 328
Westinghouse electrically heated appliances. W. E. & Mfg. Co.*... 437
Westinghouse electric tailor's goose* 838

INDUSTRIAL SECTION—*Continued.*

Westinghouse Machine Company's exports, the.....793
Westinghouse mill motor. W. E. & Mfg. Co.*..... 736
Westinghouse motor-driven portable lathe for locomotive repair shops. W. & W. Co.*..... 362
Westinghouse motors in laboratory service. T. O. & Co.*..... 796
Westinghouse postbrake type SP for rolling mill service, the. W. E. & Mfg. Co.*..... 284
Westinghouse rotary converter, a new. W. E. & Mfg. Co.*..... 836
Westinghouse storage-battery autotruck for industrial railways, the. W. M. Co.*..... 30
Westinghouse type E electrolytic lightning arresters. W. E. & Mfg. Co.*..... 591
Westinghouse type SA motors. W. E. & Mfg. Co..... 1037
Westinghouse ventilating fan, the.. 659
Willis "straight-line" meter, the. F. E. Co.*..... 966
Wireless cluster, a new separable. B. E. Mfg. Co.*..... 82
Wood-working plant, electrically driven. G. E. Co.*..... 920
Zinc in Canada, electric reduction of 242
Institute convention, the (E)..... 981
Institution of Electrical Engineers... 762
Insulator in the making, the (R)..... 507
Insulators, New Lexington gas-fired porcelain 923
Interborough bonds, new..... 376
Interborough Rapid Transit Company, $30,000,000 mortgage filed by the.. 733
Interborough's $55,000,000 mortgage approved 625
Interborough's right to claim exemption from special franchise taxation upheld 755
Interborough wins decision concerning its surplus power..... 661
Interference preventor in wireless telegraphy (R)..... 964
International Conference on Electrical Units and Standards 905
International Congress for the Prevention of Accidents..... 904
International Exhibition of the Applications of Electricity..... 512
International Exposition of the Applications of Electricity..... 377
International telegraph conference..... 841
Interruption to Marconi system..... 721
Interstate Commerce Commission over electric railways, jurisdiction of the (R)..... 196
Intrinsic brilliancy harmful, how is? (E) 97
Ionium, a new radioactive element (R) 786
Ionization of the air, the (E)..... 373
Iowa associations, meeting of..... 695
Iowa electrical associations, meetings of 318, 720
Iowa Street and Interurban Railway Association, the..... 607
Iron, the rusting of..... 955
Italian water power station, an (R)... 392
Ithaca section of the American Institute of Electrical Engineers..... 346
494, 772

J

Jacksonville, Fla., municipal lighting plant of the city of..... 795

K

Kashmir hydroelectric works, the, by Cy. Whitwell*..... 490
Kashmir power scheme, progress of the 61
Kellogg Switchboard and Supply Company shares suit, important decision in the..... 281
Kelvin memorial meeting..... 100

L

Laboratory assistant, Bureau of Standards 732
Laboratory for a porcelain insulator factory, a high-tension (R)..... 115
Lake County Electric Power Company, the 471
Lamp announcement, Edison Electric Illuminating Company of Brooklyn makes important..... 725
Lamp, a regenerative flame arc*..... 408
Lamps: Their qualities and their commercial importance, the new metal-filament, by H. Remané*..... 416
Laundry, electric heating in the*..... 768
"Leakance" and the use of Heaviside's distortionless condition in telephone transmission, the effects of (R) 691
Lectures on railroad electrification at the University of Michigan..... 511
Lehigh University Electrical Engineering Society..... 237
Letters to the Editor..... 181
Licenses in Ohio, for electrical..... 329
Light affect selenium, how does? (E).. 96
Light-distribution curves, a new method of determining (R)..... 1000
Lighting and traction conditions in the West 625
Lighting, specifications for street..... 916
Lighting system of the Orcult, California oil fields (R)..... 835
Lightning protection (E)..... 850
Lightning protection before the American Institute of Electrical Engineers, discussion on..... 855
Lightning-protection problem, a solution of the (E)..... 899
Light, the mechanical equivalent of (E) 851
Light, the mechanical equivalent of (R) 884
Lincoln Wharf station of the Boston elevated, the new generators at the* 10
Lipsey case, the end of the..... 739
Lithium in radioactive minerals (R).. 506
Locomotives supply steam for a central station 268
London county council's tramways, the. 571
London, gossip from.....413, 528
London Physical Society, electrical papers at the..... 828
London, receiver in..... 642
London street lighting, by H. Thurston Owens.* 273
London, the consumption of electricity in 505
London underground electric railways, cash provided for the..... 686
London underground, the..... 380
Long-distance electric-power transmission by direct current, by L. A. Herdt 260
Longitudinal magnetic field to X-ray tubes, application of a (R)..... 282
Lord Kelvin as an electrical engineer. 216
Lord Kelvin as a scientist, by Edward L. Nichols 269
Lord Kelvin, memorial services in honor of 47
Los Angeles, Cal., notes on, by H. Thurston Owens* 643
Louisville traction to issue more stock. 507
Low-voltage alternator for calcium carbide furnaces, test of a (R)..... 238

M

Machine, a coil-winding (R)..... 114
Machinery Club of the City of New York, the 6
Machinery Club, opening of the..... 821
Machinery, high-speed electrical, by Gerald Stoney and A. H. Law.... 648
Machinery Manufacturers' and Supply Dealers' Convention 216
Machinery Manufacturers' convention. 567
Machinery, standard performances of electrical (E) 407
Machinery, standard performances of electrical, by Dr. Rudolph Goldschmidt* 385

Mackay Companies, annual report of the 304
Maggia Valley, Switzerland, single-phase, 5,000-volt railway, the, by Frank Koester* 640
Magnet coils of bare uninsulated wire (R) 114
Magnetization, a mechanical effect accompanying (R) 541
Mahoning and Shenango Valley district, boosting electricity in the... 788
Management of production in a great factory, the (R)..... 80
Managing engineer of a power plant have a mechanical or an electrical training?, should the (E)..... 555
Manchester electric generating system, by A. H. Bridge*..... 907
Manhattan Railway bond issue..... 858
Manitoba, Government ownership of telephone unpopular in..... 528
Manufacturing interests in Chicago, electrical 72
Marconi system, interruption to..... 721
Marconi Wireless Telegraph Company of America 687
Marion, Ind., and some of the progressive methods which have caused it to be known as the Electric City.. 584
Marion Light and Heating Company, the 413
Marseilles, electrical exposition of..... 181
Maryland electric road, extensive..... 354
Massachusetts, gas and electricity in.. 812
Massachusetts Institute of Technology, notes on the electrical engineering department 988
Maximum-demand indicator, a new design of 463
Measurement of electrical conductivity, the (R)..... 1034
Mechanics' Institute, the..... 396
Mechanisms controlled by sound (E).. 2
Mediterranean region, new plants in the, by C. L. Durand 709
Memorial services in honor of Lord Kelvin 47
Merchants' Association election..... 477
Merchants' Power Company, of Memphis, Tenn., the plant of the*..... 686
Merchants' rate from the territory of the Central Passenger Association. 992
Mercury electrolytic meter, recent improvements in the (R)..... 26
Merz-Prince system of automatic protection for high-tension circuits, the (R)..... 964
Metallic-filament lamps 47
Metal-filament lamps (R)..... 472
Metallic-filament lamp, a new (R).... 735
Metallic filaments and revision of tariffs (R) 360
Metallic filaments for electric lamps, manufacture of 902
Metallic mirror for searchlight, a..... 684
Metallic-filament lamps, the value of (R) 1001
Metallic-filament glow lamps, development and prospects of the (R).... 1035
Methods of getting new business*..... 116, 584, 788
Metric system in Denmark..... 271
Metropolitan lines, receivers authorized to rehabilitate 883
Metropolitan Street Railway system, New York city, the investigation of the 685
Mexican electric projects..... 21
Mexican Light and Power Company... 327
Mexican telephone enterprise..... 495
Michigan Electric Association..... 610
Michigan electric lines..... 923
Minnesota Electrical Association, the.. 495
Missouri and Kansas Telephone Company 415
Missouri Electric Light, Gas and Street Railway Association 718
Missouri Independent Telephone Association 906
Missouri River Power Company, the failure of the Hauserlake dam of the* 770
Missouri River Power Company, trouble for the..... 639
Misoxer Valley, a 1,500-volt, continuous-current railway in the (R)... 196
Moctezuma Copper Company at Nacazari, Sonora, Mexico, steam-turbine power and transmission plant of the, by John Langton and Charles Legrand* 576
Montana-Tonopah mill, electrical driving at the..... 477
Montreal holding company, for a..... 719
Morse Electric Club, the..... 377
Motherwell Iron and Steel Works, electric driving at the..... 458
Motor, a single-phase railway, by E. F. Alexanderson* 103
Motor installation, a novel single-phase* 16
Motor, the development of the flame-proof (R) 583
Motor, the new single-phase (E)..... 96
Motors in churches, electric (E)..... 2
Moving-picture machines in New York city, reducing the hazard of..... 280
Mr. Edison's condition..... 377
Mr. McAdoo, word to you..... 379
Mullaney, complimentary dinner to Thomas F..... 785
Municipal ownership deal in Winnipeg. 527
Murnau-Oberammergau single-phase railway, by Cyril J. Honkins*..... 529
Murnau-Oberammergau single-phase railway, the 733

N

Nashua Manufacturing Company, Curtis turbines in the power plant of the* 770
National architectural exposition..... 684
National Board of Fire Underwriters' committee on rheostat, the..... 176
National Conference on Standard Electrical Rules..... 460
National Conference on Standard Electrical Rules, meeting of the..... 534
National Conference on the Conservation of Natural Resources..... 832
National Education Association..... 950
National Electrical Trades Association. 923
National Electrical Contractors' Association 982
National Electric Company bankruptcy ready to be closed..... 695
National Electric Light Association... 233, 359, 467, 638, 708, 807, 808, 849
National Electric Light Association, Commercial Day programme..... 420
National Electric Light Association convention (E) 807
National Electric Light Association convention exhibit 467
National Electric Light Association, thirty-first convention of the..... 638
National Electric Light Association, thirty-first convention of the (E). 849
National Electrical Trades Association. 988
National Society for the Promotion of Industrial Education 137
Natural resources, preserving our (E). 805
Natural resources, electricity as an agent in conserving (E)..... 980
Nature of Gamma and X-rays (R)..... 282
Navigation of the air*..... 463
Navy Department, electrical supplies for the..... 276, 346, 436, 467, 495, 587, 612, 639, 684, 797, 858
Nebraska Electrical Association, the.. 359, 642
Nebraska electrical show postponed... 471
Nabraska Electrical Trades Association 318
New-business methods, by L. D. Mathes 688
New England and Philadelphia sections of the Illuminating Engineering Society elect officers..... 193
New England section of the Illuminating Engineering Society..... 471
New Haven reduces force..... 264
New Haven road to build Portchester electric line..... 107
New Haven system of single-phase distribution, with special reference to sectionalization, the, by W. S. Murray* 134
New Haven to sell its trolley lines.... 840
New kind of ray, a (E)..... 1014
New plants in the Mediterranean region,* by C. L. Durand..... 709
New use for silicon..... 945
New York Electrical Society..... 1018
New York & New Jersey Telephone Company, changes in the..... 376
New York Central bond issue..... 679
New York city railway companies to report on car equipment..... 733
New York city subway relief plan.... 461
New York city traction investigation ended 882
New York electrical show, the..... 173
New York Edison Company, meeting of the contract and inspection department of the..... 982
New York Electrical Society..... 185, 718, 905, 943, 1018
New York Electrical Society, annual meeting of the..... 943
New York Electrical Trade School, lecture before 833
New York fire-alarm system..... 701
New York State Electrical Contractors' Association 176
New York state legislation..... 678
New York State Public Service Commission for the First District, the work of the..... 556
Niagara Falls Power Company, inspection of tunnels of the..... 988
Niagara, Lockport & Ontario Power Company, the 216
Non-synchronous generator in central station and other work, the, by W. L. Waters*..... 305
North Dakota Independent Telephone Association 941
Northern Telephone Society..... 63
Northwestern Electrical Association, annual meeting of the..... 47

O

Overload in electrical stations (R).... 1034
Obermatt power plant in Switzerland, the 27,000-volt transmission system of the, by Frank Koester*..... 934
OBITUARY.
Alexander, P. H..... 515
Anthony, Professor William Arnold 927
Barnes, Walter I..... 332
Barr, Thomas Carson..... 447
Beam, I. Willard..... 927
Brill, John A..... 547
Burry, John..... 480
Carnes, Lew Conway..... 663
Clarke, Joseph W..... 126
Dunlop, George Thomas..... 292
Elliott, Charles B..... 292
Erner, John A..... 801
Halstead, Marshal..... 250
Heath, Henry Roswell..... 699
Heger, Brigadier-General Anthony. 206
Hiscock, Albert K..... 628
Holmes, Robert C. P..... 891
Hubinger, John C..... 292
Hunie, Addison F..... 515
Kreidler, William A..... 547
May, Frederic H..... 801
McNamara, John W..... 37
Munsell, Eugene..... 699
Nichols, Othniel F..... 292
Randolph, John F..... 332
Rawson, Samuel B..... 663
Reynolds, George H..... 126
Sellers, Dr. Coleman.....37, 88
Seward, Thurlow Weed..... 292
Shafer, Daniel..... 250
Tyler, Walter L..... 206
Webb, Francis Hughes..... 927
Williams, Charles..... 663
Ohio Electric Light Association, the... 568
Ohio, for electrical licenses in..... 329

Ohio Independent Telephone Association 503
Ohio public utility law..... 288
Ohio Traction Company, receiver for... 479
Oklahoma Electric Light, Railway and Gas Association.....538, 905
"Okonite" 85
Omaha electrical show, the.....678, 791
Ondemeter, the (R)..... 690
Ontario Hydroelectric Power Commission 654
Opening of Brooklyn subway extension. 718
Oscillating arc for wireless signaling, an (E)..... 750
Oscillators as radiators in wireless telegraphy, magnetic (R)..... 114

P

Packingtown—electricity an important factor, economy and cleanliness in, by C. A. Tupper*..... 645
Patent Office squabble..... 376
Patent procedure, notes on, by F. W. Blair 569
Penetrating radiation, the (R)..... 623
Pennsylvania Electric Association..... 773
Pennsylvania Railroad places 1908 rail order 284
Pennsylvania Railroad tunnels completed, first of..... 350
Pennsylvania Street Railway Association revived..... 12
Performance of the storage battery and its relation to the power plant, by W. B. Gump*..... 947
Peru, electricity in..... 319
Peru, wireless telegraphy in..... 677
Philadelphia founder's day celebration. 777
Philadelphia Street Railway transfers. 762
Phœnix Glass Company, the..... 85
Photo-electric property of selenium.... 172
Photometer, a new universal, by Preston S. Millar*..... 141
Photometers, by Joseph H. Hart..... 826
Physical lines of force (E)..... 635
Physical treatment of alternating-current phenomena, a plea for the, by Lamar Lyndon..... 60
Physics, the foundation for electrical engineering training (E)..... 40
Picture by wireless..... 49
Pictures, wireless transmission of (E). 933
Pig iron, application of electric power in the production of (R)..... 734
Pig iron, electric smelting of (R)..... 472
Pipe lines, a color scheme for..... 587
Pittsburg section, American Institute of Electrical Engineers....312, 469, 627
Plants, the effect of electricity upon (E) 602
Platinum, control of..... 653
Pneumatic brush gear and carbon brushes for direct-current turbo-generators (R)..... 506
Pole-shoes, due to armature teeth, experimental determination of the losses in, by Thomas F. Wall and Stanley P. Smith*..... 500
Poles used by electrical companies, number of..... 905
Poor-light complaints—a central station problem (R)..... 473
Porcelains, electrical..... 987
PORTRAITS.
Allen, John..... 73
Anthony, Professor William A..... 906
Arnold, Bion J..... 69
Beardslee, Frank S..... 73
Bell, Dr. Louis..... 111
Bergenthal, V. W..... 784
Besold, G. C..... 76
Boyd, Robert S..... 619
Brown, Charles E..... 75
Brown, J. M..... 619
Bullesby, H. M..... 74
Dodd, S. M..... 784
Doolittle, Thomas B..... 619
Eglin, William C. L..... 917
Ellicott, Edward B..... 221
Hafner, H. G..... 75
Hartmann, Francis M..... 971
PORTRAITS—*Continued.*
Hibbard, Angus S..... 71
Huey, Arthur S..... 74
Insull, Samuel..... 65
Kennedy, S. E..... 75
Knight, Frank B..... 619
Kuehmsted, A. L..... 76
Kuehmsted, A. O..... 76
Layman, W. A..... 784
Lindenmuth, A. C..... 175
Lord, C. B..... 784
Madden, O. E..... 619
McFedries, S. M..... 77
McKinlock, George A..... 74
Niesz, Homer E..... 78
Osthoff, Otto E..... 74
Poppenhusen, P. Albert..... 76
Robbins, W..... 784
Roe, Julian..... 75
Thomas, W. S..... 784
Timmerman, A. H..... 784
Truex, Charles R..... 619
Vail, Theodore N..... 619
Positive electricity (E)..... 704
Possibilities of electric smelting (E)... 705
Potentiometer design, by Joseph H. Hart* 942
Poulsen wireless telegraph station at Cullercoats, England, the..... 145
Power company not taxable..... 242
Power company, $36,000,000..... 510
Power development in small stations, by Charles Robbins and J. R. Bibbins* 997
Power-houses fireproof..... 384
Power plant economies, inexpensive (E) 670
Power plants, testing of steam-electric, by Frank Koester*.....300, 340
Power station at the plant of Walter Baker & Company, Limited, the central* 277
Power stations, recent English, by A. H. Bridge*..... 852
Power suit, an interesting..... 435
Practical demonstrations are convincing, by E. L. Callahan..... 117
Preserving our natural resources (E).. 805
Pressure variations on alternate-current networks supplying motors, compensation of (R)..... 787
Producer-gas power plant fuel tests... 575
Proposed legislation for the electrical supply of London, England (R)... 197
Public Service Commission act sustained in New York state..... 354
Public Service Commission reports on Brooklyn Bridge service..... 687
Public Service Commission takes up meter testing with electric companies 281
Public Service Corporation of New Jersey authorizes big mortgage.... 777
Public service corporations, fair play for 350
Public service commission bill killed... 996
Public utility securities, the recognition of (E)..... 209
Pulp and paper mills—the Watab Pulp and Paper Company's mill, the application of electric power to*..... 314

Q

Quartz-alumina insulation, the green... 52

R

Radiation pyrometer, a new (R)..... 884
Radioactive débutante, a (E)..... 751
Radioactivity of ordinary metals, the (R) 834
Radioactivity, recent researches in (E) 338
Radiometry, instruments and methods used in (R)..... 325
Radiotelephone apparatus on shipboard* 15
Radium and the earth's heat (R)..... 435
Radium, coloration of glass and quartz by (R)..... 690
Radium in bulk..... 12
Radium on other materials, the effect of (E)..... 3
Rail corrugation (R)..... 26
Rail standards and adopts clearance diagrams for third-rail working conductors, American Railway Association acts on..... 689
Railroad electrification..... 999
Railroads and wood preservation..... 988
Railway calculations (R)..... 622
Railway electrification in Sweden (E). 1
Railway electrification, some reflections on (R)..... 393
Railway shops in the Argentine, electrically equipped (R)..... 81
Railway trains, automatic control of (E) 210
Railway work, progress in single-phase (E) 339
Rand mines, the reduction of working costs at the (R)..... 507
Rate change for the Edison Electric Illuminating Company of Boston. 945
Recent progress in tungsten metallic-filament lamps, by H. Hirst*..... 958
Record of electrical patents*..... 38
93, 129, 167, 207, 256, 295, 335, 371, 403
451, 485, 519, 551, 599, 633, 667, 701
747, 803, 847, 895, 929, 977, 1011, 1045
Rectification effect in a vacuum tube, a 963
Rectifiers, the action of (E)..... 670
Relation of the Southern Appalachian Mountains to the development of water power..... 950
Reservoirs to prevent floods and aid navigation, storage..... 883
Reunion of Thomson-Houston employés 996
Rheostat, a meter-testing*..... 433
Rheostats, construction of (R)..... 786
Rheostats, the National Board of Fire Underwriters' committee on..... 176
Richmond & Chesapeake Bay Railway, single-phase equipment for*..... 414
Rochester Railway Employés Association 118
Rockford Edison Company entertains.. 397
Rockingham Power Company, the hydroelectric plant of the, by Julian S. Miller*..... 409
Rolling mills, advantages of electrical power in (E)..... 932
Roma Civita Castellana single-phase railway, the, by B. F. Hirschauer*. 265
Roof-sign, the greatest in the world, by Benjamin Wall*..... 969
Rossiter, MacGovern & Company bankrupt 220
Rotary regulation (E)..... 337
Rubber industry in Peru and the Federated Malay States..... 466
Rubber production, decline in..... 916
Rubber production in Paraguay..... 281
Rusting of iron, the..... 955

S

Safety apparatus for broken overhead conductors (R)..... 157
Safety exposition of the American Museum of Safety Devices, the..... 769
St. Louis Buyers' Club building, the... 461
St. Louis electrical show..... 287
St. Paul Railway to have telegraph... 725
San Francisco Electrical Contractors' Association 246
San Francisco, Vallejo & Napa Valley Railroad (R)..... 734
Santos Dock Company, Santos, Brazil, electrical equipment for the..... 581
Sawmills of Messrs. J. & W. Bellhouse, the* 464
Schenectady section of the American Institute of Electrical Engineers, meetings of the.....329, 413, 719
Scientific purchase of supplies, the (E) 850
Scientific terms, careless use of (E).. 703
Seattle branch, American Institute of Electrical Engineers..... 274
Selenium cells, the electrical resistance of..... 643
Selenium, photoelectric property of.... 172
Semi-enclosed slots, a new system of former winding for (R)..... 583
Shanghai, electric railways in..... 507

Ships, electric propulsion of (E)..... 522
Shoe-cleaning company, an automatic. 161
Signals for trolley-car lines..... 274
Silicon, new use for..... 945
Simplon Tunnel, electric signaling in the 468
Single-phase distributing systems for railways (E) 132
Single-phase electric railways (R).... 360
Single-phase railroad, the first, in England, by Albert H. Bridge..... 1016
Sluice-gates for the Shoshone and Pathfinder dams, electrically operated (R) 80
Smelting of iron, a new type of electric furnace for the, by Professor B. Igewsky* 910
Smelting, possibilities of electric..... 705
Society for the Promotion of Engineering Education, the..... 943
Society for the Promotion of Engineering Education..... 1040
Society of Wireless Telegraph Engineers 937
Sodium, an emanation from (E)..... 979
Sodium, an emanation from (R)..... 1000
Some needed electrical methods (R).. 961
Some suggestions from the call-boy.... 732
Sound as a means of controlling operations at a distance (R)..... 26
Sound distortion in wireless telephony. 769
South Africa, electrical developments in 467
South American producer power plants* 382
Southern Appalachian and the White Mountain watersheds, commercial importance of the..... 272
Southwestern Electrical and Gas Association 909
Spring construction (E)..... 405
Spring construction..... 421
Standards for electrical apparatus, British, American and German (R) 1000
State control of electricity supply in Germany (R)..... 196
Steam-electric power plants, management and efficiency of the designing department and its bearing upon the first cost and economy in operation of, by Frank Koester. 101
Steam-turbine development — one-and-one-quarter-million-horse-power mark passed, present..... 503
Stevens Institute of Technology..... 274
Storage battery, performance of the, and its relation to the power plant, by W. B. Gump*..... 947
Street lighting, new principles in, by Albert J. Marshall* 478
Street railways in Pennsylvania..... 707
Suburban districts, distribution in, by George H. Lukes*..... 938
Subway cars, side doors for..... 345
Subway extension, opening of Brooklyn 718
Subways for New York city, the new.. 829
Subway to Brooklyn opened..... 111
Summer courses in engineering..... 835
Superheating, advantages and disadvantages of (R)..... 324
Surface-contact system in London..... 568
"Surges and oscillations in transmission systems"..... 608
Susquehanna Power Company to increase power development and operate toll canal system..... 346
Sweden, railway electrification in (E). 1
Sweden, the price of electric power in (R) 582
Swedish state railways, the electrification of the..... 18
Swedish state telephone, the..... 264
Swiss telegraphs and telephones..... 619
Switch-gear control apparatus and relays for alternating-current circuits, by Charles C. Garrard*..993, 1028
Synchronous converters, some developments in, by Charles W. Stone..... 348
Snythetic rubber, concerning..... 107

T

Tangential system of supporting trolley wires (R)..... 238
Technical Publicity Association....262, 718
Telegraph companies can not be sued. 923
Telegraph companies' operations, to investigate 982
Telegraphs in China (R)..... 114
Telegraph system across Africa, the, by Albert H. Bridge*..... 9
Telegraphic photography and electric vision, by Shelford Bidwell..... 1026
Telemechanic device, Dr. Branly's.... 237
Telephone and telegraph companies... 825
Telephone and telegraph service in Colombia 677
Telephone business, Chicago..... 829
Telephone company, may dissolve..... 302
Telephone industry, the flourishing (E) 487
Telephone in public crises, the (E).... 637
Telephone officials, early*.....619
Telephone pay station, a busy..... 347
Telephone progress during the past year 361
Telephone service in Paris..... 1039
Telephone situation, the..... 71
Telephone train despatching, by Edmund J. Burke..... 470
Testing of steam-electric power plants, by Frank Koester*..... 300
The F. Bissell Company*..... 85
Thermoelectric properties of common metals and their alloys (R)..... 324
Thermophone and electric waves, the (E) 171
Third Avenue Railroad to spend $2,500,000 864
Thirty-million-dollar mortgage filed by the Interborough Rapid Transit Company 733
Thomson-Houston employés, reunion of 996
Time limit for the Westinghouse $10,000,000 subscription extended to June 22 950
Tokio, Japan, hydroelectric plants for. 288
Toledo Railways and Light Company, the 271
Topeka Edison central station, the new high-efficiency lamp and the..... 318
Toronto Electric Light Company, Limited, the 329
Toronto section of American Institute of Electrical Engineers elects officers 812
Traction situation, the electric..... 69
Trade and vocational schools for New York city, report on..... 858
Tramway subway in London, the completion of the first (R)..... 690
Transatlantic wireless telegraphy (R). 582
Transfers, may limit..... 729
Transfers on street-car lines, important decision regarding..... 565
Transformers and metallic filaments (R) 656
Transformers for metallic-filament lamps, small (R)..... 884
Transformers for metallic-filament lamps, the design of small (R)... 324
Transmission lines and feeders of the New York Central and the Public Service Commission, the..... 354
Transportation routes and systems of the world..... 218
Tribley Pit, County of Durham, England, electrical installations at (R) 918
Trolley wire suspension (E)..... 170
Tungsten development, by A. H. Keleher 765
Tungsten Electric Lamp Company, the. 49
Tungsten-filament lamp, the day of the (E) 601
Tungsten lamps..... 956
Tungsten metallic-filament lamps, recent progress in, by H. Hirst*..... 958
Tunnel between New York and New Jersey opened..... 345
Turbine activities in the Far East..... 725
Turbine business, last year's..... 888
Turbine generator in Glasgow, Scotland, a large direct-current (R)... 918
Turbine plants, small..... 194
Turbines, the first cost of steam (R)... 582
Turbine, Westinghouse double-flow steam* 859
Turbo-alternator at Manchester, England, new 6,000-kilowatt (R)..... 919
Tuskegee Institute, Ala., teaching the electric trade at, by D. A. Smith*.. 611
Twenty-seven-thousand-volt transmission system of the Obermatt power plant in Switzerland, by Frank Koester* 934
Typesetting by wireless telegraphy.... 719

U

Underwriters' National Electric Association 469
Underwriters' National Electric Association electrical committee, the annual meeting of the..... 524
Underwriters' National Electric Association, subcommittees of the electrical committee of the..... 678
Underwriters' National Electric Association, the general meeting of the electrical committee of the..... 287
Union League Club, of Chicago, Ill., the plant of the*..... 772
Union Railway, receiver appointed for the 571
United Company's annual dinner, the.. 345
United States civil service examination. 626
840, 969
United States civil service examination for electrician..... 655
United States civil service examination for engineer, Indian service..... 526
United States Independent Telephone Company, receiver for..... 364
United States Telephone Company declared insolvent..... 556
United States trade with Germany..... 85
United States Weather Bureau, electricity in the, by Day Allen Willey* 900
United Wireless Telegraph Company's report, the..... 200
University of Michigan, lectures on railroad electrification at the..... 511
University of Wisconsin, summer courses at the..... 684

V

Vacuum tube, a rectification effect in a. 963
Vacuum tube, asymmetrical conduction in a (E)..... 932
Vacuum tubes, volatilization of metals in (E)..... 933
Vermont, the largest electric supply system in*..... 186
Vertical-shaft motors (R)..... 360
Volatilization of metals in vacuum tubes (E)..... 933

W

Wagner Electric Manufacturing Company, the*..... 778
Waipori (New Zealand) hydroelectric plant, the (R)..... 197
Washington, Baltimore & Annapolis Electric Railway put in operation. 313
Washington electric railway, new..... 272
Waste products, producing illuminating and power gas from*..... 512
Water for economical steam generation (R) 283
Water powers for farm work, small (E) 489
Water power, the relation of the Southern Appalachian Mountains to the development of..... 950
Wehnelt cathode in a high vacuum, the (R)..... 157
Western Electric Company..... 568
Western Electric Company election.... 376
Western Electric Company, the..... 318
Western Electric stock deposits..... 176

Westinghouse Company, to protect..... 479
Westinghouse double-flow steam turbine* 859
Westinghouse Electric and Manufacturing Company.....381, 608
Westinghouse Electric and Manufacturing Company, plan and agreement for the readjustment of debt of the..... 185
Westinghouse Electric statement..... 982
Westinghouse Lamp Company discharges receivers..... 345
Westinghouse Lamp Company receivership, termination of..... 395
Westinghouse Lamp Company to discharge receivers..... 243
Westinghouse locomotives for the New York, New Haven & Hartford Railroad, more..... 327
Westinghouse Machine Company..... 396
Westinghouse Machine Company receivership vacated..... 591
Westinghouse plan, new..... 556
Westinghouse reorganization plan..... 118
Westinghouse reorganization plan, the (E) 1015
Westinghouse $10,000,000 subscription, time limit for, extended to June 22. 950
Westinghouse terms, accept..... 377
Weston cells, the stability of (R)..... 238
Weston cell, the stability of the (E)... 211
What forestry has done..... 821
Whitney Company, proposition for the reorganization of the..... 471
Whitney Company, receiver for the.... 264
Windmills for driving dynamos in Denmark (R)..... 27
Wire inspection service..... 513
Wireless advance, the latest..... 705
Wireless communications over sea, by J. Erskine-Murray..... 4
Wireless Companies, no consolidation of 527
Wireless messages, to guard..... 302
Wireless telegraphic work in the French navy (R)..... 283
Wireless telegraphy, a directive system of, by O. C. Roos..... 727
Wireless telegraphy, for governmental control of..... 718
Wireless telegraphy, interference preventer in (R)..... 964
Wireless telegraphy, the spread of (E). 3
Wireless telegraphy, time service by (E) 669
Wireless telegraphy, typesetting by.... 719
Wireless telephony, sound distortion in 769
Wireless transmission of photographs, Knudsen's system (R)..... 835
Wireless transmission of pictures (E). 933
Wisconsin public utilities commission rules against free telephones..... 762
Wolverhampton, England, extensions of the generating plant at..... 565
World's aluminum output..... 687

X

X-rays, the nature of..... 854

Y

Youngstown Sheet and Tube Company, new power equipment for the East Youngstown mill of..... 794

AUTHORS OF ARTICLES IN VOL. LII OF THE ELECTRICAL REVIEW

Aikens, Warren, Electric Power and Lighting in a Dynamite Plant*.... 504
Alexanderson, E. F., A Single-Phase Railway Motor*..... 103
Barlow, Thomas Morgan, The Heat Conductivity of Iron Stampings*.. 177
Bibbins, J. R., and Charles Robbins, Power Development in Small Stations* 997
Blair, F. W., Notes on Patent Procedure 569
Bridge, Albert H., Electrical Affairs in Great Britain during 1907*..... 45
Electrical Notes from Great Britain. 113, 234, 418, 566, 728, 952
Manchester Electric Generating System* 907
Recent English Power Stations*..... 852
The First Single-Phase Railroad in England 1016
The Telegraph System Across Africa* 9
Burke, Edmund J., Telephone Train Despatching 470
Callahan, E. L., Practical Demonstrations Are Convincing..... 117
Carpenter, D. E., Induction Motor Starters* 244
Crafts, P. P., Handling Fares on Interurban Railways*..... 722
Durand, C. L., Electrical Notes from Europe 236, 419, 730, 951
Electrical Progress in Europe..... 55
New Plants in the Mediterranean Region* 709
The New Eiffel Tower Wireless Telegraph Station*..... 347
The New Ganz Three-Phase Locomotive* 989
Ellis, William H., The Chemical Education of the Engineer..... 944
Erskine-Murray, J., Wireless Communication Over Sea..... 4
Foell, Otto, Distribution of Light*..... 13
Garrard, Charles C., Switch-gear Control Apparatus and Relays for Alternating-Current Circuits*....993, 1028
Gernsback, H., The Dynamophone*.... 653
Goddard, Walter T., High-Voltage Insulator Manufacture*..... 227
Goldschmidt, Dr. Rudolph, Standard Performances of Electrical Machinery* 385
Gross, Arthur W., Claims—Methods of Handling Same by Electric Railways 726
Gump, W. B., Performance of the Storage Battery and Its Relation to the Power Plant*..... 947
Hallberg, J. H., The Hallberg Automatic Electric Economizer*..... 889
Hart, Joseph H., Photometers..... 826
Potentiometer Design*..... 942
Hartmann, F. M., Professor William A. Anthony* 906
Hartnell, Wilson, Heating of Ventilated and Enclosed Motors*..... 818
Harvey, Le Roy M., The Application of Electric Power to Pulp and Paper Mills—The Watab Pulp and Paper Company's Mill* 314
Hellmund, R. E., Design of Induction Motors* 172
Herdt, L. A., Long-Distance Electric Power Transmission by Direct Current 260
Hirschauer, B. F., The Roma Civita Castellana Single-Phase Railway*.. 265
Hirst, H., Recent Progress in Tungsten Metallic-Filament Lamps*.... 958
Hopkins, Cyril J., Murnau-Oberammergau Single-Phase Railway*..... 529
Hubbard, Charles L., Cooling Towers*. 138
Fuels 766
The Purification of Feed-Water*...7, 108
Igewsky, Professor B., A New Type of Electric Furnace for the Smelting of Iron*..... 910
James, W. H. N., and Alfred Schwartz, Fuse Phenomena*.....535, 572
Johnson, George B., Introducing Electric Heating and Cooking Appliances* 763
Judson, C. H., Aerial and Underground Construction 378
Keleher, A. H., Tungsten Development. 765
Kershaw, John B. C., Artificial Diamonds 381
The Electrolytic Copper-Refining Industry 497
Koester, Frank, An Interesting Development of a Small Swiss Hydroelectric Plant at Chur*..... 813
European Practice in the Electric Equipment of Theatres*..... 1023
Management and Efficiency of the Designing Department and Its Bearing upon the First Cost and Economy in Operation of Steam-Electric Power Plants..... 101
Steam or Electrically Driven Auxiliaries* 212
Testing of Steam-Electric Power Plants* 300, 340
The Maggia Valley, Switzerland, Single-Phase, 5,000-Volt Railway*.. 640
The 27,000-Volt Transmission System of the Obermatt power plant in Switzerland* 934
Langton, John, and Charles Legrand, Steam-Turbine Power and Transmission Plant of the Moctezuma Copper Company at Nacozari, Sonora, Mexico*..... 576
Law, A. H., and Gerald Stoney, High-Speed Electrical Machinery..... 648
Legrand, Charles, and John Langton, Steam-Turbine Power and Transmission Plant of the Moctezuma Copper Company at Nacozari, Sonora, Mexico*..... 576
Little, J. O., Short Talks on Central Station Advertising.....644, 679
Lukes, George H., Distribution in Suburban Districts*..... 938
Lyndon, Lamar, A Plea for the Physical Treatment of Alternating-Current Phenomena 60
Marshall, Albert J., New Principles in Street Lighting*..... 478

Mathes, L. D., New-Business Methods.. 688
Millar, Preston S., A New Universal Photometer* 141
Miller, Julian S., The Hydroelectric plant of the Rockingham Power Company* 409
Morcom, R. K., and D. K. Morris, Artificial Load for Testing Electrical Generators*..... 614
Morris, D. K., and R. K. Morcom, Artificial Load for Testing Electrical Generators*..... 614
Moses, Percival R., Engineering of the Mechanical Equipment of a Large Store Building*.....983, 1031
Murray, W. S., The New Haven System of Single-Phase Distribution, with Special Reference to Sectionalization* 134
Nichols, Edward L., Lord Kelvin as a Scientist 269
Owens, H. Thurston, London Street Lighting* 273
Notes on Los Angeles, Cal.*..... 643
Parsons, Charles A., and Alan A. Campbell Swinton, The Conversion of Diamond into Coke in High Vacuum by Cathode Rays*..... 654
Pickard, Greenleaf W., Effect of a Vacuum on Selenium..... 181
Remané, H., The New Metal-Filament Lamps: Their Qualities and Their Commercial Importance*..... 416
Richmond, J. Stanley, Grounded Neutral 181
Ripley, Charles M., Rapid Coffer-Dam Excavation* 286
Robbins, Charles, and J. R. Bibbins, Power Development in Small Stations* 997
Roos, O. C., A Directive System of Wireless Telegraphy..... 727
Annual Convention of the Society of Wireless Telegraph Engineers..... 937
Ross, A. D., Heusler's Magnetic Alloy*. 144
Royse, Daniel, Depreciation in Electric Railway Accounting..... 680
Schwartz, Alfred, and W. H. N. James, Fuse Phenomena*.....535, 572
Scott, Charles F., The Best Engineering Education 184
Smith, D. A., Teaching the Electric Trade at Tuskegee Institute, Ala.*. 611
Smith, Stanley P., and Thomas F. Wall, Experimental Determination of the Losses in Pole-Shoes, Due to Armature Teeth*..... 500
Steinmetz, Charles P., Electrical Engineering Education..... 182
Stone, Charles W., Some Developments in Synchronous Converters*..... 348
Stoney, Gerald, and A. H. Law, High-Speed Electrical Machinery..... 648
Swinton, Alan A. Campbell, and Charles A. Parsons, The Conversion of Diamond Into Coke in High Vacuum by Cathode Rays*..... 654
Townley, Calvert, The Value of Membership in the American Institute of Electrical Engineers..... 528
Tupper, C. A., Economy and Cleanliness in Packingtown—Electricity an Important Factor*..... 645
Vaughan, J. F., Comparative Tests of Lightning Protective Devices on the Taylor's Falls Transmission System 822
Von Keller, F. H., A New Form of Cooper Hewitt Mercury-Vapor Lamp* 589
Walker, Sydney F., The Early Days of the Dynamo..... 57
Wall, Benjamin, The Greatest Roof Sign in the World*..... 969
Wall, Thomas F., The Reluctance of the Air-Gap in Dynamo Machines* 22, 48
Wall, Thomas F., and Stanley P. Smith, Experimental Determination of the Losses in Pole-Shoes, Due to Armature Teeth*..... 500
Waters, W. L., The Non-Synchronous Generator in Central Station and Other Work*..... 305
Whitwell, Cy., The Kashmir Hydroelectric Works*..... 490
Willcox, Francis W., The New Incandescent Lamps..... 774
Willey, Day Allen, Electricity in the United States Weather Bureau*... 900
Woodhouse, W. B., The Commercial Aspect of Electric Power Supply... 53